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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HAVERSTOCK & OWENS LLP  
162 NORTH WOLFE ROAD  
SUNNYVALE, CA 94086

EXAMINER
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NGUYEN, DUSTIN

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/923,924

Applicant(s)

BALDONADO ET AL.

Examiner

Dustin Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 23-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 and 23-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Please see below.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Continuation of IDS: 03/02/2006, 05/15/2006, 07/24/2006, 07/31/2006.

### **DETAILED ACTION**

1. Claims 1-10 and 23-32 are presented for examination.

### ***Response to Arguments***

2. Applicant's arguments filed 06/05/2006 have been fully considered but they are not persuasive.

3. As per remarks, Applicants' argued that (1) Ahuja reference does not suggest each of the plurality of performance scores indicating performance of a route from a router of the one or more routers to the prefix via a distinct service provider access link from the plurality of service provider access links, as claimed in claim 1.

4. As to point (1), it is rejected for similar reason as mentioned in the previous Office Action. Furthermore, Ahuja discloses each of the plurality of performance scores indicating performance of a route from a router of the one or more routers to the prefix [ i.e. cost function that can assign a cost to any routing table ] [ col 3, lines 27-29; and col 5, lines 15-25 ] via a distinct service provider access link from the plurality of service provider access links [ i.e. PNAP connects to network service providers and one or more routers in the PNAP must have a routing table that specifies a next-hop AS to the destination ] [ col 17, lines 43-55; and col 18, lines 27-30 ].

5. As per remarks, Applicants' argued that (2) Ahuja does not teach a implementing a route update request according to a priority queue, wherein the route update request corresponds to the superior performance score, further wherein the priority queue prioritizes received route update requests according to urgency and implements the route update request according to a frequency of a previously implemented route update request.

6. As to point (2), the claimed limitations are rejected as disclosed below in claims 27 and 32.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5, 8-10, 23-25 rejected under 35 U.S.C. 102(e) as being anticipated by Ahuja et al. [ US Patent No 6,981,055 ].

9. As per claim 1, teaches a method of routing data flow traversing one or more routers in an internetwork [ i.e. core or edge routers ] [ 604, Figure 18; 704, Figure 19; col 18, lines 60-67;

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and col 19, lines 32-35 ], wherein the one or more routers are coupled to a plurality of service provider access links [ Figure 17; and col 17, lines 40-62 ], the method comprising:

determining a prefix for the data flow [ i.e. determine path selection for each prefix ] [ col 1, lines 50-52; and col 19, lines 5-8 ];

calculating a plurality of performance scores for the plurality of service provider access links [ i.e. measure performance of paths ] [ col 3, lines 12-20; and col 5, lines 5-14 ], each of the plurality of performance scores indicating performance of a route from a router of the one or more routers to the prefix via a distinct service provider access link from the plurality of service provider access links [ i.e. routing table ] [ Figures 9, 11-14; col 12, lines 49-60; and col 13, lines 1-30 ];

detecting a current service provider access link for the prefix, the current service provider access link corresponding to a current route to the prefix specified by a routing protocol, the current service provider access link having a performance score from the plurality of service provider access links [ i.e. start routing table or OldValue ] [ col 15, lines 2-5; and col 15, lines 29-col 16, lines 14 ]; and

selecting a new service provider access link from the plurality of service provider access links for routing the data flow to the prefix [ i.e. new routing table or NewValue ] [ col 14, lines 51-col 15, lines 15; and col 16, lines 7-14 ], wherein the new server provider access link has a performance score from the plurality of performance scores superior to the performance score for the current service provider access link [ i.e. finding superior combinations of routes ] [ col 3, lines 1-7; and col 7, lines 6-13 ].

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10. As per claim 2, Ahuja discloses wherein the plurality of performance scores is at least partially dependent upon delay measurements across the plurality of service provider access links [ i.e. latency ] [ col 6, lines 13-34 ].

11. As per claim 3, Ahuja discloses wherein the plurality of performance scores is at least partially dependent upon jitter measurements across the plurality of service provider access links [ i.e. network condition or changes in physical medium ] [ col 8, lines 10-15; and col 14, lines 59-62 ].

12. As per claim 4, Ahuja discloses wherein the plurality of performance measurement scores is at least partially dependent upon loss measurements across the plurality of service provider access links [ i.e. packet loss ] [ col 3, lines 12-20 ].

13. As per claim 5, Ahuja discloses wherein each of the plurality of performance scores comprises a scalar value [ i.e. cost function ] [ col 14, lines 7-49 ].

14. As per claim 8, Ahuja discloses wherein the plurality of performance scores is customized for VoIP traffic [ col 5, lines 22-25 ].

15. As per claim 9, Ahuja discloses wherein the plurality of performance scores is at least partially dependent upon interface load measurements [ i.e. balancing load ] [ col 13, lines 1-20 ].

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16. As per claim 10, Ahuja discloses wherein the plurality of performance scores is at least partially dependent upon user configurable weights [ col 9, lines 7-19 ].

17. As per claim 23, Ahuja discloses transmitting the selected new service provider access link to the one or more routers [ i.e. communicate ] [ col 3, lines 36-40 ].

18. As per claim 24, Ahuja discloses wherein the selected new service provider access link is transmitted using a Border Gateway Protocol update message [ col 1, lines 63-67 ].

19. As per claim 25, Ahuja discloses wherein selecting a new service provider access link comprises comparing a best route to a default BGP route [ i.e. finding an optimal route ] [ Abstract; and col 2, lines 16-18 ].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 6, 7 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahuja et al. [ US Patent No 6,981,055 ] in view of Gossett Dalton, Jr. et al. [ US Patent No 6,426,955 ].



21. As per claim 6, Ahuja does not specifically disclose wherein the plurality of performance scores is customized for HTTP traffic. Gossett Dalton discloses wherein the plurality of performance scores is customized for HTTP traffic [ col 9, lines 39-51 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Ahuja and Gossett Dalton because Gossett Dalton's teaching of different traffic types would allow to expand the capability of the system to improve performance.

22. As per claim 7, Gossett Dalton discloses wherein the plurality of performance scores is customized for video traffic [ Abstract ].

23. As per claim 26, it is rejected for similar reasons as stated above in claims 6-8.

24. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahuja et al. [ US Patent No 6,981,055 ] in view of Sistanizadeh et al. [ US Patent No 6,963,575 ].

25. As per claim 27, it is rejected for similar reasons as stated above in claim 1. Furthermore, Ahuja does not specifically disclose a implementing a route update request according to a priority queue, wherein the route update request corresponds to the superior performance score, further wherein the priority queue prioritizes received route update requests according to urgency and implements the route update request according to a frequency of a previously implemented

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route update request and configuring a router to select an access link corresponding to the route update request. Sistanizadeh discloses a implementing a route update request according to a priority queue [ i.e. assign different priority levels to these different classes ] [ col 6, lines 42-47; and col 18, lines 43-58 ], wherein the route update request corresponds to the superior performance score [ i.e. best path for routing or best cost parameter ] [ col 8, lines 26-32; and col 27, lines 50-53 ], further wherein the priority queue prioritizes received route update requests according to urgency [ i.e. time critical traffic ] [ col 18, lines 49-62 ] and implements the route update request according to a frequency of a previously implemented route update request [ col 29, lines 53-63 ] and configuring a router to select an access link corresponding to the route update request [ i.e. select the best path for each communication ] [ col 11, lines 18-23 ]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Ahuja and Sistanizabeh because Sistanizabeh's teaching of routing update would allow traffic to take the redundant paths through the network in the case of failure of network components and still provide service at the guaranteed levels, for the duration of the fault [ Sistanizabeh, col 21, lines 10-14 ].

26. As per claim 28, Ahuja discloses transmitting data related to a route containing the selected access link to the one or more access links [ i.e. communicate ] [ col 3, lines 36-40 ].

27. As per claim 29, Ahuja discloses wherein the data comprises network layer reachability information [ col 1, lines 30-41 ].

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28. As per claim 30, Ahuja discloses wherein selecting a new service provider access link depends on a difference between a performance score of the new service provider access link and a performance score of the current service provider access link [ col 16, lines 7-14 ].

29. As per claim 31, Ahuja discloses assessing a penalty to a performance score for at least one of the current service provider access link and the new service provider access link [ col 2, lines 14-18 ].

30. As per claim 32, it is rejected for similar reasons as stated above in claim 27.

Furthermore, Ahuja does not specifically disclose transmitting a routing change corresponding to the route update request to one or more routers along the routes to route data along an access link. Sistanizadeh discloses transmitting a routing change corresponding to the route update request to one or more routers along the routes to route data along an access link [ i.e. notify neighboring switches ] [ col 15, lines 45-51; and col 24, lines 38-47 ]. It would have been obvious

**31. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after


the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (571) 272-3971. The examiner can normally be reached on flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Follansbee John can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

Dustin Nguyen  
Examiner  
Art Unit 2154